



INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	Docket Number: ACE-00101.P.1.1-US	Application Number: 10/705,447
	Applicant: Xiao Xu	
	Filing Date: November 10, 2003	Group Art Unit: 1632

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
NAB	P1	2003/0032000	02/2003	Liu et al			
	P2	2005/0014130	01/2005	Liu et al			
	P3	USRE38,323	11/2003	Sugihara et al			
	P4	6,368,795	04/2002	Hefti			
	P5	6,376,233	04/2002	Wolf et al			
	P6	6,461,808	10/2002	Bodner et al			
	P7	6,485,905	11/2002	Hefti			
	P8	6,566,079	05/2003	Hefti			
	P9	6,573,063	03/2003	Hochman			
	P10	6,626,902	09/2003	Kucharczyk et al			
	P11	6,627,461	09/2003	Chapman et al			
	P12	6,686,193	02/2004	Maher et al			
NAB	P13	6,716,620	04/2004	Bashir et al			

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------

FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
							YES	NO
NAB	F1	EP 1195432B1	09/2004	EPO	X	X		
	F2	01/25769	04/2001	PCT				
	F3	02/04943	01/2002	PCT				
	F4	02/42766	05/2002	PCT				
	F5	03/016887	02/2003	PCT				
NAB	F6	05/005979	01/2005	PCT				

OTHER DOCUMENTS (Including Author, Date, Pertinent Pages, Etc.)		
EXAMINER INITIALS		CITATION
NAB	D1	Bieberich and Guiseppi-Elie, Biosensors and Bioelectronics, 19:923-931 (2004)
	D2	Burnett et al., J. Biomo. Screening, 8(6):660-667 (2003)
	D3	Ciambrone et al., J. Biomo. Screening, 9(6):467-480 (2004)
	D4	Ehret et al., Med. Biol. Eng. Comput. 36:365-370 (1998)
	D5	Ehret et al., Biosensors and Bioelectronics, 12(1):29-41 (1996)
	D6	Gutmann et al., Pharmaceutical Research, 16(3):402-407 (1999)
NAB	D7	Hug, Assay and Drug Dev. Tech., 1(3):479-488 (2003)

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
EXAMINER INITIALS		CITATION
NAB	D8	Lin and Huang, J. Micromech. Microeng., 11:542-547 (2001)
	D9	Lin et al., Min. For Chem., Bio., & Bioeng., 4:104-108 (2004)
	D10	Wegener et al., Eur. J. Physiol., 437:925-934 (1999)
	D11	Wolf et al., Biosensors and Bioelectronics, 13:501-509 (1998)
	D12	Xiao and Luong, Biotechnol. Prog., 19:1000-1005 (2003)
	D13	Xiao et al., Anal. Chem., 74:5748-5753 (2002)
	D14	Yamauchi et al., Nuc. Acids Res., 32(22):1-8 (2004)
NAB	D15	Loffert et al., QIAGENNews, 4:15-18 (1997)

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------



INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	Docket Number: ACE-00101.P.1.1-US	Application Number: 10/705,447
	Applicant: Xiao Xu	
	Filing Date: November 10, 2003	Group Art Unit: 1632

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
NAB	P1	2002/0032531	03/2002	Mansky et al			
	P2	2002/0076690	06/2002	Miles et al			
	P3	2002/0086280	07/2002	Lynes et al			
	P4	2002/0110847	08/2002	Baumann et al			
	P5	2002/0150886	10/2002	Miles et al			
	P6	2,656,508	10/1953	Coulter			
	P7	3,259,842	07/1966	Coulter et al			
	P8	3,743,581	07/1973	Cady et al			
	P9	3,890,201	06/1975	Cady			
	P10	4,072,578	02/1978	Cady et al			
	P11	4,225,410	09/1980	Pace			
	P12	4,686,190	08/1987	Cramer et al			
	P13	4,920,047	04/1990	Giaever et al			
	P14	5,134,070	07/1992	Casnig			
	P15	5,187,096	02/1993	Giaever et al			
	P16	5,218,312	06/1993	Moro			
	P17	5,278,048	01/1994	Parce et al			
NAB	P18	5,284,753	02/1994	Goodwin			

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------

U. S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
NAB	P19	5,563,067	10/1996	Sugihara et al			
	P20	5,626,734	05/1997	Docoslis et al			
	P21	5,643,742	07/1997	Malin et al			
	P22	5,801,055	09/1998	Henderson			
	P23	5,810,725	10/1998	Sugihara et al			
	P24	5,851,489	12/1998	Wolf et al			
	P25	5,981,268	11/1999	Kovacs et al			
	P26	6,051,422	04/2000	Kovacs et al			
	P27	6,132,683	10/2000	Sugihara et al			
	P28	6,169,394	01/2001	Frazier et al			
	P29	6,232,062	05/2001	Kayyem et al			
	P30	6,235,520	05/2001	Malin et al			
	P31	6,280,586	08/2001	Wolf et al			
	P32	6,288,527	09/2001	Sugihara et al			
	P33	6,368,851	04/2002	Baumann et al			
	P34	6,376,233	04/2002	Wolf et al			
	P35	6,448,030	09/2002	Rust et al			
	P36	6,448,794	09/2002	Cheng et al			
NAB	P37	6,472,144	10/2002	Malin et al			
	P38						

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------

FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
							YES	NO
NAB	F1	96/01836	01/1996	PCT				
	F2	99/66329	12/1999	PCT				
	F3	00/71669	11/2000	PCT				
	F4	01/038873	05/2001	PCT				
NAB	F5	02/42766	05/2002	PCT				
	F6							

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
EXAMINER INITIALS		CITATION
NAB	D1	Aravanis et al. A genetically engineered cell-based biosensor for functional classification of agents. Biosensors & Bioelectronics 16:571-577 (2001)
NAB	D2	Baumann et al. Microelectronic sensor system for microphysiological application on living cells. Sensors & Actuators B55:77-89 (1999)
NAB	D3	Becker et al, Separation of human breast cancer cells from blood by differential dielectric affinity. Cell Biology. 92:960-964 (1995)
NAB	D4	Berens et al, The role of extracellular matrix in human astrocytoma migration and proliferation studied in a microliter scale assay. Clin. Exp. Metastasis 12:405-415 (1994)
NAB	D5	Bergveld, A critical evaluation of direct electrical protein detection methods, Biosensors& Bioelectronics. 6:55-72 (1991)
NAB	D6	Burns et al, Neutrophil Transendothelial Migration Is Independent of Tight Junctions and Occurs Preferentially at Tricellular Corners. Journal of Immunology 2893-2903 (1997)

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
EXAMINER INITIALS		CITATION
NAB	D7	Duan et al, Separation-Free Sandwich Enzyme Immunoassays Using Microporous Gold Electrodes and Self-Assembled Monolayer/Immobilized Capture Antibodies, Anal. Chem. 66:1369-1377 (1994)
	D8	Connolly et al., An extracellular microelectrode array for monitoring electrogenic cells in culture Biosensors & Bioelectronics 5: 223-234 (1990)
	D9	Ehret et al, Monitoring of cellular behaviour by impedance measurements on interdigitated electrode structures. Biosensors and Bioelectronics 12(1):29-41 (1997)
	D10	Ehret et al, On-line control of cellular adhesion with impedance measurements using interdigitated electrode structures, Medical & Biological Engineering and Computing 36:365-370
	D11	Falk et al, A 48-well Micro Chemotaxis Assembly for Rapid and Accurate Measurement of Leukocyte Migration. J Immunol. Meth. 33:239-247 (1980)
	D12	Fuhr et al, Positioning and Manipulation of Cells and Microparticles Using Miniaturized Electric Field Traps and Travelling Waves. Sensors and Materials 7(2):131-146 (1995)
	D13	Gaiever et al, Monitoring fibroblast behavior in tissue culture with an applied electric field. Proc. Natl. Acad. Sci 81:3761-3764 (1984)
	D14	Gaiever et al, Micromotion of mammalian cells measured electrically. Proc. Natl. Acad. USA 88: 7896-7900 (1991)
	D15	Hadjout et al., Automated Real-Time Measurement of Chemotactic Cell Motility BioTechniques 31: 1130-1138 (2001)
	D16	Henning et al, Approach to a multiparametric sensor-chip-based tumor chemosensitivity assay, Anti-Cancer Drugs 12:21-32 (2001)
	D17	Hidalgo et al, Characterization of the Human Colon Carcinoma Cell Line (Caco-2) as a Model System for Intestinal Epithelial Permeability. Gastroenterology 96:736-749 (1989)
NAB	D18	Huang et al., Dielectrophoretic Cell Separation and Gene Expression Profiling on Microelectronic Chip Arrays. Anal. Chem. 74:3362-3371 (2002)

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
EXAMINER INITIALS		CITATION
NAB	D19	Keese et al, Real-time impedance assay to follow the invasive activities of metastatic cells in culture. Biotechniques 33:842-850 (2002)
	D20	Kleinmann et al, Basement Membrane Complexes with Biological Activity. Biochemistry. 26:312-318 (1986)
	D21	Kowolenko et al., Measurement of macrophage adherence and spreading with weak electric fields. Journal of Immunological Methods 127: 71-77 (1990)
	D22	Larsen et al, Somatic Cell Counting with Silicon Apertures. Micro Total Analysis Systems 103-106 (2000)
	D23	Lo et al, Monitoring motion of confluent cells in tissue culture, Experimental Cell Research 204:102-109 (1993)
	D24	Lo et al., pH Changes in pulsed CO ₂ incubators cause periodic changes in cell morphology Experimental Cell Research 213: 391-397 (1994)
	D25	Lo et al., Impedance Analysis of MDCK cells measured by electric cell-substrate impedance sensing Biophysical Journal 69: 2800-2807 (1995)
	D26	Luong, et al., Monitoring Motility, Spreading, and Mortality of Adherent Insect Cells Using an Impedance Sensor. Analytical Chemistry 73: 1844-1848 (2001)
	D27	Mitra et al, Electric measurements can be used to monitor the attachment and spreading of cells in tissue culture. Biotechniques 11(4):504-510 (1991)
	D28	Miyata et al, New Wound-Healing Model Using Cultured Corneal Endothelial Cells. Jpn. J. Ophthalmol. 34:257-266 (1990).
	D29	Neher, Molecular biology meets microelectronics Nature Biotechnology 19: 114 (2001)
	D30	Nerurkar et al, The Use of Surfactants to Enhance the Permeability of Peptides Through Caco-2 Cells by Inhibition of an Apically Polarized Efflux System. Pharmaceutical Research 13(4):528-534
NAB	D31	Ong et al, Remote Query Resonant-Circuit Sensors For Monitoring of Bacterial Growth: Application to Food Quality Control. Sensors 2:219-222 (2002)

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
EXAMINER INITIALS		CITATION
NAB	D32	Pancrazio et al, Portable cell-based biosensor system for toxin detection. Sensors and Actuators B 53:179-185 (1998)
	D33	Patolsky et al, Detection of single-base DNA mutations by enzyme-amplified electronic transduction. Nature Biotechnology 19:253-257 (2001)
	D34	Pethig et al, Positive and negative dielectrophoretic collection of colloidal particles using interdigitated castellated microelectrodes. Appl. Phys. 24:881-888 (1992)
	D35	Richards et al, A Modified Microchamber Method For Chemotaxis and Chemokinesis. Immunological Communications 13(1):49-62 (1984)
	D36	Rishpon et al, An amperometric enzyme-channeling immunosensor, Biosensors & Bioelectronics, 12(3):195-204 (1997)
	D37	Simpson et al., Whole-cell biocomputing Trends in Biotechnology 19: 317-323 (2001)
	D38	Sohn et al, Capacitance cytometry: Measuring biological cells one by one. Proc. Nat. Acad. Sci. 97(20):10687-10690 (2000)
	D39	Stenger et al., Detection of physiologically active compounds using cell-based biosensors. Trends in Biotechnology 19: 304-309 (2001)
	D40	Svetlicic et al., Charge displacement by adhesion and spreading of a cell Bioelectrochemistry 53: 79-86 (2000)
	D41	Tiruppathi et al, Electrical method for detection of endothelial cell shape change in time: assessment of endothelial barrier function. Proc Natl Acad Sci USA 89:7919-7923 (1992)
	D42	Wang et al, A theoretical method of electrical field analysis for dielectrophoretic electrode arrays using Green's theorem. Appl. Phys. 1649-1660 (1996)
	D43	Wang et al, Selective dielectrophoretic confinement of bioparticles in potential energy wells. Appl. Phys. 26:1278-1285 (1993)
NAB	D44	Wang et al, Cell Separation by Dielectrophoretic Field-flow-fractionation. Anal. Chem. 72:832-839 (2000)

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
EXAMINER INITIALS		CITATION
NAB	D45	Wang et al, Dielectrophoretic Manipulation of Cells with Spiral Electrodes. Biophysical Journal 72:1887-1899 (1997)
	D46	Wang et al, Separation of Polystyrene Microbeads Using Dielectrophoretic/Graviational Field-Flow-Fractionation. Biophysical Journal 74:2689-2701 (1998)
	D47	Wang et al., Electronic Manipulation of Cells on Microchip-Based Devices. In Biochip Technology (eds.) Harwood Academic Publishers, PA U.S.A. 135-159
	D48	Warburg, Ueber die Polarisationscapacitat des Platins. Ann. Phy. 6:125-135 (1901)
	D49	Wegener et al, Electric cell-substrate impedance sensing system (ECIS) as a noninvasive means to monitor the kinetics of cell spreading to artificial surfaces, Experimental Cell Research, 259:158-166 (2000)
	D50	Wolf et al, Monitoring of cellular signalling and metabolism with modular sensor-technique: The PhysioControlMicrosystem (PCM). Biosensors & Bioelectronics 13:501-509 (1998)
	D51	Xiao et al, An in-depth Analysis of Electric Cell-Substrate Impedance Sensing To Study the Attachment and Spreading of Mammalian Cells, Anal. Chem 74:1333-1339 (2002)
	D52	Yang et al, Cell Separation on Microfabricated Electrodes Using Dielectrophoretic/Gravitational Field-Flow Fractionation. Anal. Chem. 71:911-918 (1999)
	D53	http://www.neuroprobe.com/protocol/pt_96a.html
	D54	http://www.bdbiosciences.com/discovery_labware/Products/inserts/BD_Falcon_HTS_fluoroblok_inserts/individual_fluoroblok_inserts/index.html
	D55	http://www.tecan.com/migration_introl.pdf
	D56	New Products page. Science 298:2409 (2002)
	D57	Abstract: Real-Time Impedance Assay to Follow the Invasive Activities of Metastatic Cells in Culture. Biotechniques 33: 842 (2002)
NAB	D58	http://www.biophysics.com/pages/front.html

Examiner Signature	/Nathan Bowers/	Date Considered	10/20/2006
-----------------------	-----------------	--------------------	------------